



GFO-20-309 Pre-Application Workshop

Title: Advancing and Commercializing Energy Efficiency in California's Industrial, Agricultural and Water sector (2021 ACEE Program)

Presenter: Michael Lozano, P.E.

Date: January 13th, 2021



Housekeeping

- Zoom recording
- Muting on Zoom
- Questions
- Updates on solicitation documents including this presentation will be posted at the Grant Funding Opportunity's webpage:

<https://www.energy.ca.gov/solicitations/2020-12/gfo-20-309-advancing-and-commercializing-energy-efficiency-californias>



Agenda

Time	Item
10:00 am	Welcome and Introduction
10:05 am	Solicitation Background <ul style="list-style-type: none">• EPIC Research Program• Purpose of Solicitation• Available Funding
10:25 pm	Application Requirements <ul style="list-style-type: none">• Project Requirements• Attachments• Submission Process
11:00 am	Q&As
12:00 pm	Adjourn



Commitment to Diversity

- The Energy Commission adopted a resolution strengthening its commitment to diversity in our funding programs. The Energy Commission continues to encourage disadvantaged and underrepresented businesses and communities to engage in and benefit from our many programs.
- To meet this commitment, Energy Commission staff conducts outreach efforts and activities to:
 - Engage with disadvantaged and underrepresented groups throughout the state.
 - Notify potential new applicants about the Energy Commission's funding opportunities.
- Assist applicants in understanding how to apply for funding from the Energy Commission's programs.
- Survey participants to measure progress in diversity outreach efforts.



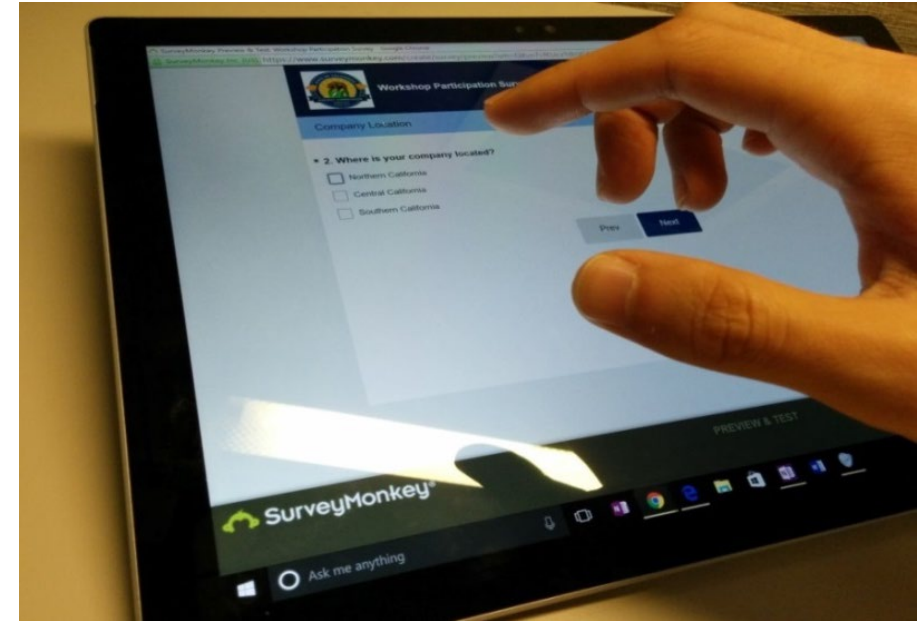
We Want to Hear From You!

1 Minute Survey

The information supplied will be used for public reporting purposes to display anonymous overall attendance of diverse groups.

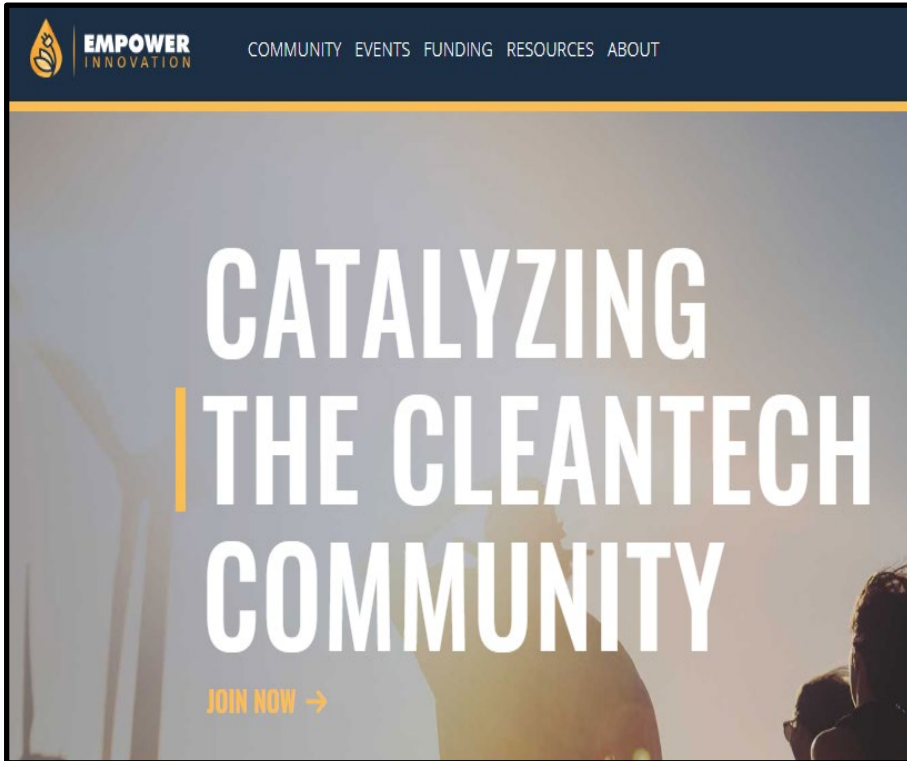
- Zoom participants, please use this link:
<https://www.surveymonkey.com/r/GFO-20-309>

Thanks!





Connect With Us





Find Partners on EmpowerInnovation.net

Empower Innovation strives to accelerate your clean tech journey with easy access to funding opportunities from the Energy Commission and other funding providers, curated resources and events, and connections to people and organizations.

FIND A PARTNER

Announce your interest in a funding opportunity and message other potential project partners.

RESOURCES & TOOLS

Browse the collection of resources including Resource Libraries, Funding Sources, Tools, and Databases.

To connect with others for this GFO please go to this link:

<https://www.empowerinnovation.net/en/custom/funding/view/19235>



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Please direct questions for the Empower Innovation platform to:

https://www.empowerinnovation.net/en/contact_us



Research Program Background

- The Electric Program Investment Charge (EPIC) Program is an electricity ratepayer surcharge established by the California Public Utilities Commission (CPUC) in December 2011.
- The purpose of the EPIC program is to benefit the ratepayers of the three investor-owned utilities (IOUs).
- The EPIC program funds clean energy technology projects that promote greater electricity reliability, lower costs, and increased safety:
 - Applied research and development (ARD)
 - Technology demonstration and deployment (TDD)
 - Market facilitation (MF)



Policy Drivers

- **SB 32:** reduction of GHG emission to 40 percent below 1990 levels by 2030.
- **SB 100:** ensure that California's transition to a zero-carbon electric system does not cause or contribute to greenhouse gas emissions (GHG) increases.
- **SB 350:** California's Renewable Portfolio Standard and Energy Efficiency for End-Use Customers.
- **2019 California Energy Efficiency Action Plan:** expands on the Existing Buildings Energy Action Plan and includes topics related to existing buildings' energy efficiency, low-income barriers to energy efficiency, and doubling energy efficiency by 2030.



Purpose of Solicitation

This solicitation is to accelerate the development and commercialization of promising pre-commercial technologies in California's dairy and municipal wastewater treatment sectors.

For Dairies:

- Identify and demonstrate emerging electricity saving technologies that can directly reduce electricity and GHG emissions in the milk and cheese processing lifecycle.

For Municipal Wastewater:

- Demonstrate at a municipal wastewater treatment facility the operation of emerging **advanced primary treatment and/or advanced secondary treatment** technologies for municipal wastewater treatment.

Projects must fall within one of the following project groups:

- **Group 1:** Advanced Energy Management and Monitoring of the Dairy Industry
- **Group 2:** Advanced Treatment Processes for Wastewater Treatment Plants



Available Funding

Project Group	Available Funding	Minimum Award Amount	Maximum Award Amount
Group 1: Advanced Energy Management and Monitoring of the Dairy Industry	\$9,000,000	\$1,500,000	\$6,000,000
Group 2: Advanced Treatment Processes for Wastewater Treatment Plants	\$4,000,000	\$2,000,000	\$4,000,000



Match Funding

- A **minimum of 20%** match funding is required.
- Applicants that provide more than 20% match funding may receive additional points during the scoring phase.
- Match funding contributors must submit match funding commitment letters that meet the requirements of Attachment 10. Failure to do so may disqualify the match funding commitment from consideration.
- Refer to Section I.K. in the Solicitation Manual for more details on match funding.



Group 1 – Advanced Energy Management and Monitoring of the Dairy Industry

- The aim is to digitize the dairy and dairy adjacent industries (milk, cheese, and their associated products) through the adoption of advanced sensors, data management, machine learning, and best practices to optimize electric equipment operations.
- The goal is to make the technology applicable and useable for other dairies and industrial operations beyond those participating as a demonstration site under this solicitation.
- Technologies sought are either pre-commercial or underutilized and are currently at TRL of 7-8 with the expectation to progress up one or more levels by the end of the project.



Group 1 – Continued

- The goal of projects from this group is to demonstrate the technology at multiple sites in order to develop a performance baseline for dairies of different sizes and configurations across the state.
- The applicant will propose at least five project sites:
 - **At least three must be identified by name** with commitment letters at the time of application.
 - **Provide an installation price per site**, identify all project fixed and variable costs, and provide an estimated electrical and GHG reduction potential per site.
 - **Independent 3rd party M&V** – to measure and quantify project benefits.



Group 1 – Continued

Example research includes, but is not limited to the following:

- Software development and application of machine learning to control algorithms for optimization of electricity intensive processes in milk/cheese/related dairy operations.
- Energy-efficient programming, to optimize electricity intensive equipment used in the dairy/agriculture industry.
- Machine learning and cloud computing integration to optimize operations and production. This technology is intended to be used and result in benefits applicable to many similar sites, not just the specific demonstration site(s) under investigation as part of the proposed project.
- Software and sensors to monitor for and identify leaks or losses of dairy process stream liquids and steam, electrical drawdowns, thermal leaks, compressed air and other electrical inefficiencies.

NOTE – see Section I.C.1 for additional information on research topics



Group 2: Advanced Treatment Processes for Wastewater Treatment Plants

- The goal is to demonstrate (at scale) that advanced primary and secondary treatment can increase energy efficiency and increase overall treatment plant capacity while reducing operational and maintenance costs.
- Technologies must be at technology readiness level of 5-8 with the expectation to progress up one or more levels by the end of the project.
- Technologies must have a pathway to commercialization and deployment in California's municipal wastewater treatment facilities to ensure the benefits of the project will extend beyond the scope and term of the grant agreement.



Group 2 – Continued

- Applicants may propose to focus on advanced primary treatment, advanced secondary treatment, **or both at the same facility**.
- For projects that propose both, the municipal wastewater treatment plant influent must be treated by an advanced primary treatment process then by the advanced secondary and **the entire treatment process is kept separate** from the conventional secondary treatment process.
- The demonstration will be at sufficient scale – treating at a minimum **500K gals/day**.
- Project must have an **Independent 3rd party M&V** – to measure and quantify project benefits.



Group 2 – Continued

Example research includes, but is not limited to the following:

Options	Compare	Versus
1	Advanced Primary + Conventional Secondary	Conventional Treatment Process - Primary and Secondary currently in operation and serves as the baseline)
2	Conventional Primary + Advanced Secondary	
3	Advanced Primary + Advanced Secondary	

NOTE – see Section I.C.2 for additional information on research topics



Group 2 – Continued

Example research includes, but is not limited to the following:

- **Advanced primary treatment methods**
 - Cloth depth filters
 - Compressible medium filters
 - Micro-screen
 - Rotating belt filter/screen, and
 - Other novel filters or filter media
- **Advanced secondary treatment methods**
 - Aerobic granular sludge
 - Anaerobic ammonium oxidation

NOTE – see Section I.C.2 for additional information on research topics



Eligible Applicants

- This is an open solicitation for public and private entities.
- Applicants must accept the EPIC terms and conditions.
 - Standard, UC, and DOE T&Cs available online:
<https://www.energy.ca.gov/funding-opportunities/funding-resources>
- Applicants are required to register with the California Secretary of State and be in good standing to enter into an agreement with the Energy Commission:
<http://www.sos.ca.gov>



Application Requirements

Each Applicant must complete and include the following:

1. Application Form (.pdf)	7. Budget (.xlsx)
2. Executive Summary (.docx)	8. CEQA Compliance Form (.docx)
3. Project Narrative (.docx)	9. References and Work Product Form (.docx, .pdf)
4. Project Team (.docx, .pdf)	10. Commitment and Support Letters (.pdf)
5. Scope of Work (.docx)	12. Applicant Declaration (.docx)
6. Project Schedule (.xlsx)	

* Note: Contact List Attachment is no longer needed



Project Narrative (Attachment 3)

The narrative should explain the entirety of the project, including:

- Why is your project necessary and important to California?
 - What is your project approach and how will each major task be implemented?
 - How will the project be completed in the term proposed.
 - How will the project outcomes benefit electric ratepayers?
 - Address the requirements as described in **Section I.C.**
-
- Respond to the scoring criteria described in **Section IV.F** and the questions in Section I.C of the Solicitation Manual.



Scope of Work (Attachment 5)

- Tell us exactly what you are proposing to do in your project.
- Identify what you will deliver to the Energy Commission.
- Be sure to include in the technical tasks:
 - At least one product deliverable per task.
 - Address requirements in Section I.C. under Project Focus.
- Be sure to include in the Project Schedule (Attachment 6):
 - Product deliverables that correspond with the Scope of Work.
 - Realistic dates on when product deliverables can be completed.



Budget (Attachment 7)

- Identify how the Energy Commission funds and match funds be spent to complete the project.
- Subcontractors **receiving \$100,000** or more Energy Commission funds must complete a **separate budget form**.
- Ensure that all rates provided are maximum rates for the entire project term.
- **Travel Restrictions:**
 - CEC funds should be limited to lodging and any form of transportation (e.g., airfare, rental car, public transit, parking, mileage).
 - If an applicant plans to travel to conferences, including registration fees, they must use match funds.



Commitment and Support Letter Forms (Attachment 10)

- Follow guidelines provided for commitment and support letters.
 - Commitment letters are required for entities or individuals that are committing match funding, testing/demonstration sites, including the **Prime**.
 - Support letters describe a project stakeholder's interest or involvement in the project.
- All applicants must submit **at least one** support letter.
- Match funding must be supported by a match fund commitment letter.
- Any project partners that will make contributions to the project (other than match and sites) must submit a commitment letter.
- Limit to two pages per letter, excluding the cover page.



How will my Application be Evaluated?

Application Screening

Admin Screening Process

1. Energy Commission staff screens applications per criteria in Section IV.E.
2. Criteria are evaluated on a pass/fail basis.
3. Applicants must pass all screening criteria, or the application will be disqualified.

Some Reasons for Disqualification

- ☐ Application is not submitted by the specified due date and time.
- ☐ Application does not include one or more support letters.
- ☐ Application contains confidential material.



How will my Application be Evaluated?

- Evaluation Committee applies the scoring scale to the scoring criteria.
- Applications must pass project team past performance.
- Applications must obtain a **minimum passing score of 52.5 points for Criteria 1-4** in order to continue evaluation.
- Applications must obtain a **minimum passing score of 70 points for Criteria 1-7** in order to be considered for funding.
- Review Section IV of the manual and ensure the application provides a clear and complete response to each scoring criteria.

Scoring Criteria	Maximum Points
Project Team Past Performance	Pass/Fail
1. Technical Merit	15
2. Technical Approach	25
3. Impacts and Benefits for CA IOU Ratepayers	20
4. Team Qualifications	15
5. Budget and Cost-Effectiveness	10
6. Funds Spent in CA	10
7. Ratio of Direct Labor Costs to Loaded Labor Costs	5
Total	100
Minimum Points to Pass	70



How will my Application be Evaluated?

- **Passing applications (score of 70 or more from Criteria 1-7) will be considered for bonus points. Criteria for bonus points include:**
 - **Match Funding**
 - **Disadvantaged Communities**

Scoring Criteria	Maximum Points
8. Match Funds	10
9. Disadvantaged & Low-income Communities	5
Total Bonus Points	15



Match Funding Points

- Applicants may receive up to 10 additional preference points based on the criteria below:
 - Up to 5 points will be awarded based on the ratio of proposed Cash contributions divided by total match (cash + in-kind) using the Cash Match Scoring Table in the Scoring Criteria.
 - The remaining 5 points may be awarded to applications that exceed the minimum match requirements using the Exceeds Minimum Match Scoring table.
 - Refer to Section IV.F in the Solicitation Manual for more details on the match funding scoring criteria.



Disadvantaged & Low-income Communities

- Projects located in low-income and/or disadvantaged communities **and with justification** on how the project will benefit these communities may receive additional points.
- Disadvantaged Communities are those designated pursuant to Health and Safety Code section 39711 as representing the 25% highest scoring census tracts in CalEnviroScreen or other areas with high amounts of pollution and low populations as identified by CalEPA. Please see <https://calepa.ca.gov/envjustice/ghginvest/> for the most current CalEPA designations.
- Low-income Communities are defined as communities within census tracts with median household incomes at or below 80 percent of the statewide median income or the applicable low-income threshold listed in the state income limits updated by the Department of Housing and Community Development. (<https://www.hcd.ca.gov/grants-funding/income-limits/state-and-federal-income-limits.shtml>)



GFO Submission Requirements (Electronic)

- Preferred method of Delivery is the Energy Commission Grant Solicitation System, available at: <https://gss.energy.ca.gov/>.
- Electronic files must be in Microsoft Office Word (.doc, .docx) and Excel (.xls, .xlsx) formats, unless originally provided in solicitation in another format.
- Attachments requiring signatures (Application Form and Support/Commitment Letters) may be scanned and submitted in PDF format.
- First-time users must register as a new user to access system.
- Electronic files submitted via e-mail **will not be accepted.**



GFO Submission Requirements (Hard Copy)

- Delivery: Due to COVID-19, application hard copies will only be accepted via U.S. Mail, Federal Express (FedEx), or United Parcel Service (UPS).
- Submit Applications with all attachments in the order specified in Section III of the manual and by the due date specified in Section I.
- Application documents should meet formatting requirements, page limits, and number of copies specified.
- Provide one hard copy and one electronic copy (CD-ROM or USB stick) containing electronic files of the application.
- There is no need to submit a hard copy of an application that is submitted through the Grant Solicitation System as it will only cause confusion.
- **In order to be consistent with orders and recommendations from state and local officials to encourage physical distancing to slow the spread of COVID-19, in-person delivery of applications will not be allowed.**



Signature Requirements

- The CEC waived the requirement for a signature on application materials for this solicitation for submissions. A notice, regarding CEC's waiver of the signature requirement appears here:
<https://www.energy.ca.gov/funding-opportunities/solicitations>
- The waiver applies to Attachments 1, 10 and 12. However, all these attachments must be completed, where indicated, and included with your application.
- If you are an awardee, the CEC will require wet or electronic signatures for these attachments within 30 days after posting of the Notice of Proposed Award.



Next Steps After Grant Award

- **Notice of Proposed Award:** Shows total proposed funding amounts, rank order of applicants, and the amount of proposed award.
- **Agreement Development:** *Proposal documents will be processed into a legal agreement.*
- **Failure to Execute:** The Energy Commission reserves the right to cancel the pending award if an agreement cannot be successfully executed with an applicant. (See Section IV.B)
- **Project Start:** Recipients may begin work on the project only after the agreement is fully executed (approved at an Energy Commission business meeting and signed by the Recipient and the Energy Commission).



Key Dates

Activity	Date
Solicitation Release	12/23/2020
Pre-Application Workshop	1/13/2021 at 10 am
Deadline for Written Questions	1/20/2021 at 5:00 pm
Anticipated Distribution of Questions and Answers	Week of 2/8/2021
Deadline to Submit Applications	3/8/2021 at 5:00 pm
Anticipated Notice of Proposed Award Posting	Week of 4/5/2021
Anticipated Energy Commission Business Meeting	6/9/2021
Anticipated Agreement Start Date	6/30/2021
Anticipated Agreement End Date	3/31/2025



Additional Questions

Please send all questions related to GFO-20-309 to:

Natalie Johnson

Commission Agreement Officer

1516 Ninth Street, MS-18

Sacramento, CA 95814

Natalie.Johnson@energy.ca.gov

Deadline to submit questions:

Wednesday, 1/20/2021 5:00 PM



Questions and Answers

- Please use the raise hand function in Zoom if you'd like to ask your question
 - Zoom Phone controls:
 - *9 - Raise hand.
 - *6 - Toggle mute/unmute.
- You may also use the Q&A function in Zoom to type your question
- We will answer verbal questions first, then will respond to questions in the Q&A chat
- Please introduce yourself by stating your name and affiliation.
- Keep questions under 3 minutes to allow time for others.
- Note that our official response will be given in writing and posted on the GFO webpage in about two weeks.
- Send written questions to Natalie.Johnson@energy.ca.gov by no later than **January 20th, 2021 by 5 p.m. PST.**



Thank You!